

FORM PTO-1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. K-1782 D		SERIAL NO. (to be assigned)							
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary) (37 CFR 1.98(b))				APPLICANT RONALD M. PENICH et al.		FILING DATE August 5, 2003 GROUP (to be assigned)							
U.S. PATENT DOCUMENTS													
EXAMINER INITIAL		PATENT NUMBER				ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE			
A		4	5	4	0	5	9	6	9/85	Nimmagadda	427	37	
		4	5	5	4	2	0	1	11/85	Andreev et al.	428	215	
		4	5	9	9	2	8	1	7/86	Schintmeister et al.	428	699	
		4	6	4	3	9	5	1	2/87	Keem et al.	428	469	
		4	6	8	6	1	5	6	8/87	Baldoni II et al.	428	698	
		4	7	1	4	6	6	0	12/87	Gates, Jr.	428	698	
		4	7	5	3	8	5	4	8/88	Gavrilov et al.	428	698	
		4	7	7	6	8	6	3	10/88	Van den Berg et al.	51	295	
		4	8	3	5	0	6	2	5/89	Holleck	428	469	
		4	8	4	2	7	1	0	6/89	Freller et al.	204	192.38	
A		4	8	9	5	7	7	0	1/90	Schintmeister et al.	428	552	
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION													
		DOCUMENT NUMBER				PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION			
		0	5	9	2	9	8	6	7/98	Europe	X		
		0	7	0	9	4	8	3	5/96	Europe	X		
		9	8	4	4	1	6	3	10/98	PCT	X		
		3	5	3	2	7	3	3	6/86	Germany		X	
A		0	4	4	6	3	7	5	11/85	Europe	X		
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)													
	A	H. Curtins, PLATIT: a new industrial approach to cathodic arc coating technology, Surface and Coatings Technology 76-77 (1995) pp. 632-639											
	I	S. Kadiac and J. Muell, Sputtering systems with magnetically enhanced ionization for ion plating of TiN films, J. Vac. Sci. Technol. A 8 (3), May/June 1990 pp. 1318-1324											
	I	Hsieh et al. Deposition and characterization of TiAlN and multi-layered TiN/TiAlN coatings using unbalanced magnetron sputtering, Surface and Coatings Technology (1998) pp. 132-137											
	I	Anderson et al. Deposition, microstructure and mechanical and tribological properties of magnetron sputtered TiN/TiAlN multilayers, Surface and Coatings Technology (2000) pp. 219-226											
	A	Akari et al., Reduction in Macroparticles during the deposition of TiN films prepared by arc ion plating, Surface and Coatings Technology 43/44(1990) pp. 312-323											
EXAMINER		<i>chun</i>						DATE CONSIDERED					
								6/6/04					
EXAMINER: Initial citation rendered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.													

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EXAMINER INITIAL	PATENT NUMBER			ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE					
A	4	8	8	4	9	4	0	1/91	Bryant et al.	407	119		
	5	0	7	1	6	9	3	12/91	Sue et al.	428	212		
	5	0	7	5	1	8	1	12/91	Quinto et al.	428	698		
	5	2	0	8	1	0	2	5/93	Schulz et al.	428	336		
	5	2	5	2	3	6	0	10/93	Hutti et al.	427	255.2		
	5	2	6	6	3	8	9	11/93	Omorio et al.	428	216		
	5	3	2	8	8	7	5	7/94	Euda et al.	501	87		
	5	3	3	0	8	5	3	7/94	Hofmann et al.	428	697		
	5	3	6	8	9	3	9	11/94	Kawamura et al.	428	408		
	5	4	7	8	6	3	4	12/95	Setoyama et al.	428	216		
A	5	5	0	3	9	1	2	4/96	Setoyama et al.	428	216		
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION													
	DOCUMENT NUMBER			PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION YES NO					
A	0	7	0	1	9	8	2	3/96	Europe			X	
	0	5	9	2	9	8	6	4/94	Europe			X	
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)													
A	McCandlish et al., Processing and Properties of Nanostructured WC-Co, Nanostructured Materials Vol. 1, (1992) pp. 119-124												
	Subramanian et al., Review of multicomponent and multiplayer coatings for tribological applications, Wear, 165 (1993) pp. 85-95												
	Chu, Deposition and properties of polycrystalline TiN/NbN superlattice coatings, J. Vac. Sci. Technol. A 10(4), Jul/Aug 1992 pp. 1604-1609												
	Holleck, Designing Advanced Coatings For Wear Protection, Surface Engineering 1991 Vol. 7 No. 2 pp. 137-144												
A	Holleck et al., Preparation And Behaviour of Wear-Resistant TiC/TiB ₂ , TiN/TiB ₂ And TiC/TiN Coatings with High Amounts of Phase Boundaries, Surface and Coatings Technology, 36 (1988) pp. 707-714												
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U.S. PATENT DOCUMENTS											
EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE				
A		5 5 4 9 9 7 5	8/96	Schulz et al.	428	553					
		5 5 8 8 9 7 5	12/96	Hammond et al.	51	283					
		5 6 5 6 3 8 3	8/97	Tanaka et al.	428	627					
		5 6 7 9 4 4 8	10/97	Kawata	428	216					
		5 7 0 0 5 5 1	12/97	Kukino et al.	428	212					
		5 7 1 2 0 3 0	1/98	Goto et al.	428	332					
		5 7 8 3 2 9 5	7/98	Barnett et al.	428	216					
		5 8 3 3 0 2 1	11/98	Mensa-Wilmot et al.	175	433					
		5 8 5 3 8 7 3	12/98	Kukino et al.	428	336					
		5 8 8 2 7 7 7	3/99	Kukino et al.	428	216					
A		5 8 8 2 7 7 8	3/99	Sugizaki et al.	428	216					

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION									
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION		
							YES	NO	

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)	
A	Holleck, Summary Abstract: Wear Resistant Carbide-Boride Composite Coatings, J. Vac. Sci. Technol. A 3(6), Nov/Dec 1985 pp. 2345-2347
	Holleck, Material Selection for Hard Coatings, J. Vac. Sci. Technol. A 4(6), Nov/Dec 1986 pp. 2661-2669
	Holleck, Multilayer Coatings - Influence of Fabrication Parameters on Constitution and Properties, Surface and Coatings Technology, 41 (1990) pp. 179-190
	Holleck et al., Significance of Phase Boundaries in Wear Resistant TiC/TiB, Materials High Tech Ceramics, Elsevier Science Publishers B.V., Amsterdam 1987 pp. 2609-2622
A	English abstract of JP 7018416 A2 to Aisuo
A	English abstract of JP 052106 A2 to Shinichi

EXAMINER 	DATE CONSIDERED 6/04
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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. K-1782D	SERIAL NO. (to be assigned)
APPLICANT(S) RONALD M. PENICH et al.		
FILING DATE August 5, 2003		GROUP Art Unit (to be assigned)

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLAS S	SUBCLASS	FILING DATE IF APPROPRIATE
A	AA	5	9	7	8	2	0	7	11/1999	Anderson et al.	361	311	
	AB	6	1	1	1	6	9	7	08/2000	Merrill et al.	359	497	
	AC	6	3	0	6	2	6	6	10/2001	Metin et al.	204	192.12	
	AD	6	0	5	1	1	1	3	04/2000	Moshlehi, Mehrdad M.	204	192.12	
	AE	5	6	8	7	6	7	9	11/1997	Mullin et al.	123	41.79	
A	AF	6	0	4	5	6	6	7	04/2000	Moll, Eberhard	204	192.38	
	AG	5	0	7	1	6	9	3	12/1991	Sue et al.	428	212	
	AH												
	AI												
	AJ												
	AK												

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER							DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
													YES	NO
	AL													
	AM													
	AN													
	AO													
	AP													

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AQ													
	AR													
	AS													

EXAMINER

DATE CONSIDERED

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* English translation of the abstract

PTO/SB/08b(05-03)

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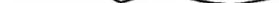
Substitute for form 1449B/PTO

(Use as many sheets as necessary)

Sheet	1	of	1
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Complete If Known

Application Number	10/634,433
Filing Date	August 5, 2003
First Named Inventor	Penich et al.
Art Unit	
Examiner Name	
Attorney Docket Number	K-1782C

Examiner Signature		Date Considered	6/04
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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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